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(12) United States Patent

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(54) AIR CURTAIN FOR UREA MIXING CHAMBER

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(57) ABSTRACT

An exemplary embodiment includes a blending chamber having a urea inlet, a blending chamber gas inlet, and a blending chamber outlet. A urea source provides a pressurized urea solution to the urea inlet at a urea injection pressure, and a pressurized gas source transmits pressurized gas to the blending chamber gas inlet via a passageway. The passageway is configured to decrease pressure of the pressurized gas transmitted along its length from a first pressure of gas received from the pressurized gas source to a second pressure of gas provided to the blending chamber gas inlet. The first pressure of gas received from the pressurized gas source is greater than the urea injection pressure and the second pressure of gas provided to the blending chamber gas inlet is less than the urea injection pressure.

16 Claims, 5 Drawing Sheets

